

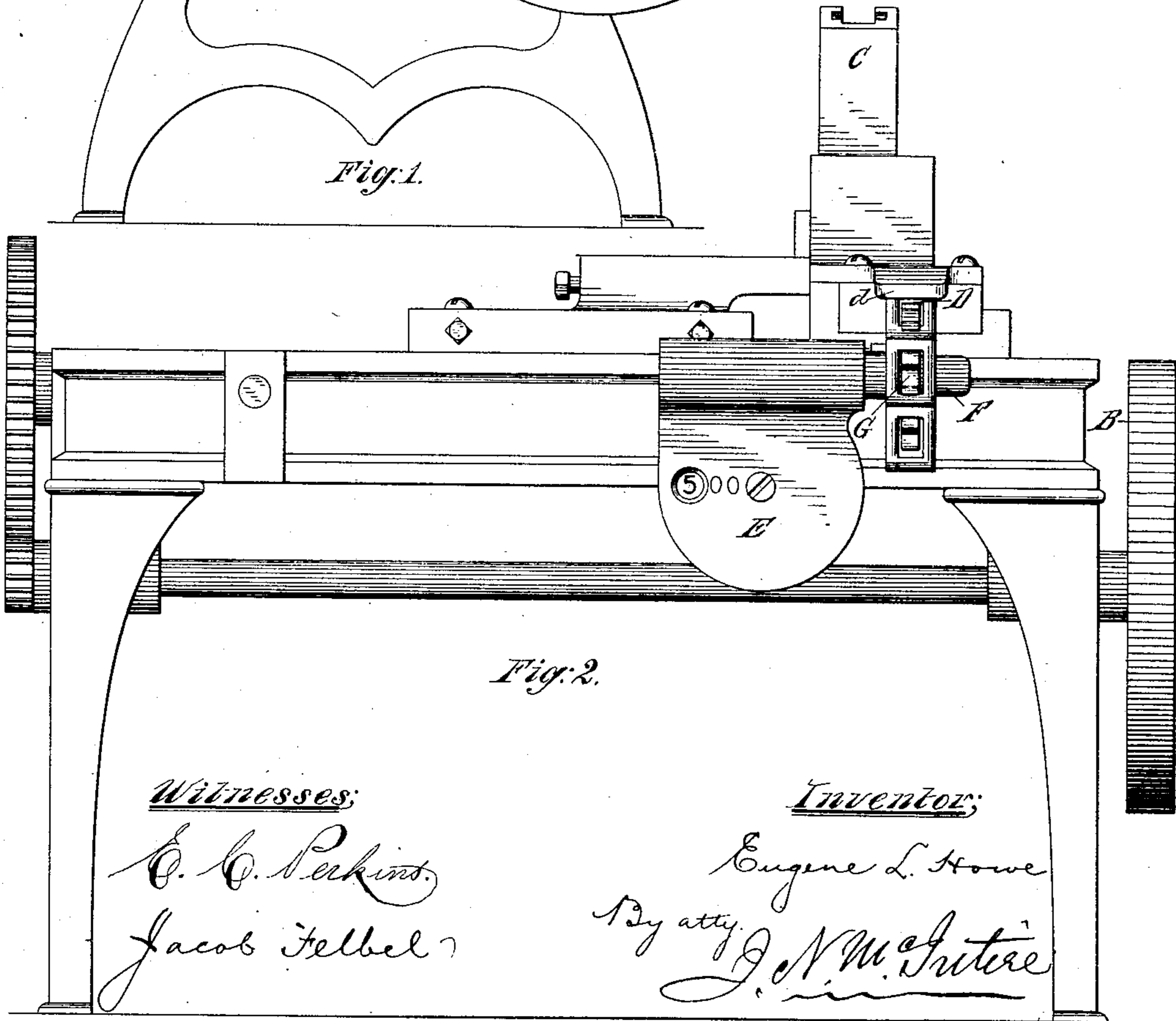
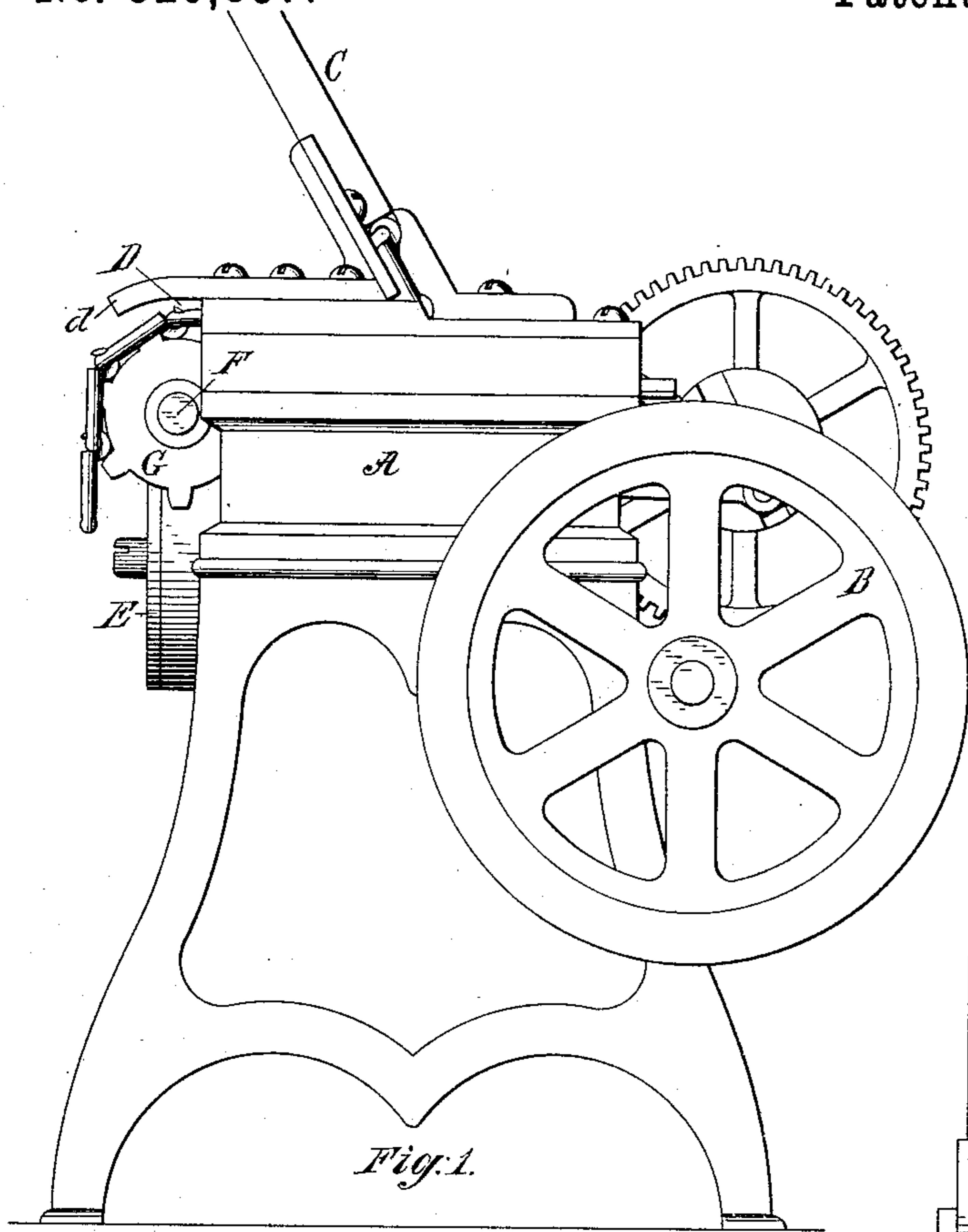
(No Model.)

E. L. HOWE.

LINK COUNTING ATTACHMENT FOR CHAIN MACHINES.

No. 329,837.

Patented Nov. 3, 1885.



UNITED STATES PATENT OFFICE.

EUGENE L. HOWE, OF CHICAGO, ILLINOIS.

LINK-COUNTING ATTACHMENT FOR CHAIN-MACHINES.

SPECIFICATION forming part of Letters Patent No. 329,837, dated November 3, 1885.

Application filed October 6, 1884. Serial No. 144,833. (No model.)

To all whom it may concern:

Be it known that I, EUGENE L. HOWE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements for Registering or Counting Chain-Links in Chain-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making
10 part of this specification.

My invention relates to means for counting or measuring the quantity of chain which may be put up or put together ready for market by machinery adapted either to the manufac-
15 ture of chains or adapted only to perform the operation of putting together ready for use and sale the links of what are known to the trade as "detachable drive-chains."

In another application by me filed simultaneously with this I have shown and described a novel machine for putting together the links of what is known as the "Ewart Detachable Drive Chain," and in this case I have
20 elected to show a measuring and registering contrivance applied to such a machine as forms the subject-matter of my said other application.

Previous to my invention it has been necessary, after putting together all the links of
30 such detachable drive-chains, (usually by hand,) to count the number of links or else measure the length of chain or weigh the same in order to discover and keep a record of the quantity of the manufactured chain sent out
35 from the factory. By my present invention I propose to avoid all this labor; and to this main end and object my invention may be said to consist in the combination, with a machine for either putting together the links of
40 such detachable chains or for making and turning out completed chains in length, of a suitable counting or registering device or mechanism worked or operated by the finished chain as the latter is discharged from the machine, all as will be hereinafter more fully
45 explained.

To enable those skilled in the art to which my invention relates to make and use the same, I will now proceed to more fully describe it,
50 referring by letters of reference to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is an elevation, and Fig. 2 is a back view, of a machine for putting together detachable drive-chain, having combined there-
55 with a counting and registering device which perfectly registers the number of links of the chain discharged from the said machine.

In the different figures the same part will be found designated by the same letter of ref-
60 erence.

As the machine for putting together the links forms the subject-matter of my other application, where it will be found fully de-
65 scribed, and as the subject-matter of this case is not restricted to this particular kind of machine, no detailed description of the latter is necessary in this specification. It is only necessary to say that in the drawings A represents the main frame; B, the drive-pulley; C,
70 the feed-chute, and D the guideway within which the finished chain is automatically fed toward the point of discharge. At the rear of the main frame A is properly arranged and secured in place a counting and registering
75 contrivance or mechanism, E, the main or operating spindle of which, F, is provided with a tooth or sprocket-wheel, G, which is arranged in such relationship to the discharge end of the guideway D that the finished chain, as it
80 is discharged from the machine, has its centrally-open links fed immediately over and into engagement with the teeth or sprocket at the upper portion of the periphery of said sprocket-wheel. Immediately over and a
85 short distance from the upper portion of the periphery of said sprocket-wheel is an extension or lip-like supplement to the catch-plate of the guideway D, and this extension d of said catch-plate performs the office of holding
90 down the finished chain toward the periphery of the sprocket-wheel while said chain is being discharged from the machine, and thus insuring the periodical or intermittent turning or driving of said sprocket-wheel by said
95 chain as the latter is forced out of the machine by the means employed in said machine for positively feeding along in the guideway D the finished chain. Each movement or partial ro-
100 tation of the said sprocket-wheel of the registering contrivance marks or registers the passage from the machine of one link of the chain length, so that during the discharge of any given length of chain from the machine said

counting mechanism will register the whole number of links of such length of the chain.

Of course any desired form and construction of counting or registering mechanism may be
5 employed, and in a machine adapted for either producing or putting together the links of chains of different sizes the registering contrivance or mechanism may either have its sprocket-wheel removable, for the purpose of
10 applying wheels with different-sized teeth, (to suit the different sizes of chain,) or the entire registering mechanism may be made removable, so that registers of different capacities and with different-sized sprocket-wheels may
15 be applied to the same machine, accordingly as the same machine may be used to turn out chain of one or another size. I do not, therefore, wish to be understood as limiting my claim of invention to either specific form or
20 construction of registering mechanism or to the combination of such mechanism with any particular form or construction of chain-making or chain-link-assembling machine; but,

25 Having now so fully explained the nature of my invention that any one skilled in the art

can accomplish all the desirable purposes thereof by combining with any chain-making or chain-link-assembling machine any suitable registering contrivance in such a manner that the latter shall be operated through the medium of a toothed wheel arranged to be inter-
30 mittingly or otherwise rotated by the finished chain as it passes from the machine, what I claim as new, and desire to secure by Letters Patent, is—

35 In combination with a machine for either producing chain or for assembling the links thereof, a suitable registering mechanism, the operating shaft or spindle of which is provided with a chain-wheel arranged, as specified, in
40 such relationship to the discharge-exit of said machine that the finished chain, in its passage from said machine, will drive said chain-wheel, all substantially as hereinbefore set forth.

In witness whereof I have hereunto set my
45 hand this 1st day of September, 1884.

EUGENE L. HOWE.

In presence of—

GLENN G. HOWE,
J. H. NICKELSON.